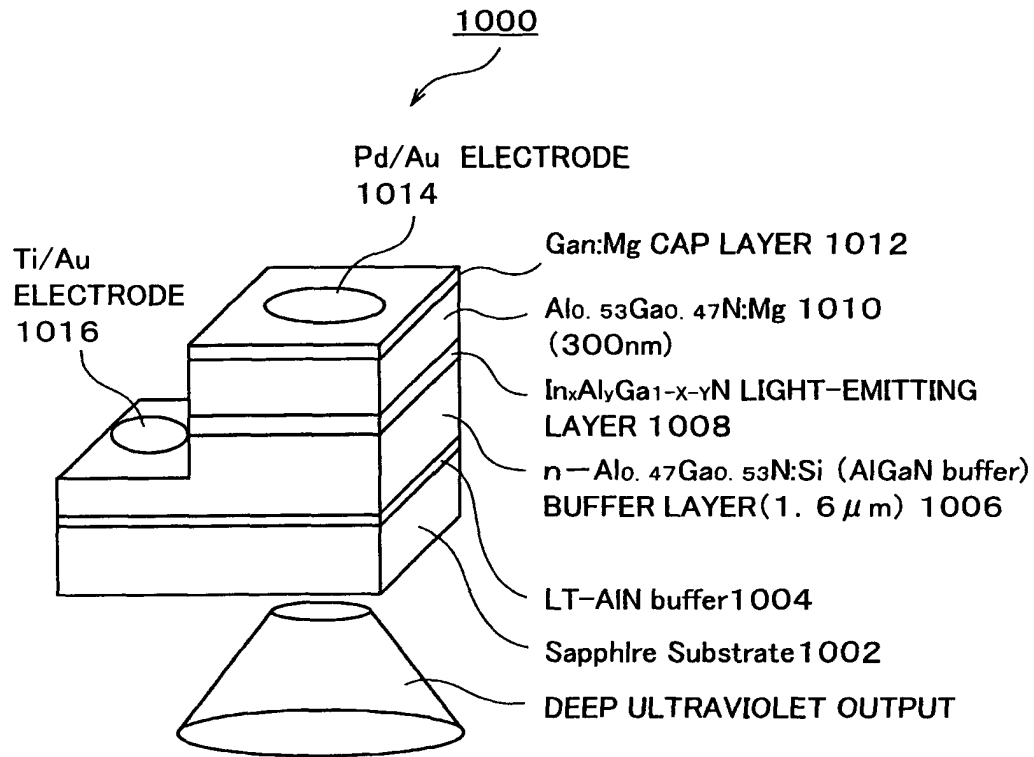


FIG. 1



LED TYPE I : WITH InAlGaIn LIGHT-EMITTING LAYER (EMISSION WAVELENGTH $\lambda = 308\text{nm}$)
(In_xAl_yGa_{1-x-y}N : x=0.02, y=0.44)

LED TYPE II : WITH InAlGaIn LIGHT-EMITTING LAYER (EMISSION WAVELENGTH $\lambda = 314\text{nm}$)
(In_xAl_yGa_{1-x-y}N : x=0.02, y=0.40)

LED TYPE III : WITHOUT InAlGaIn LIGHT-EMITTING LAYER

FIG. 2

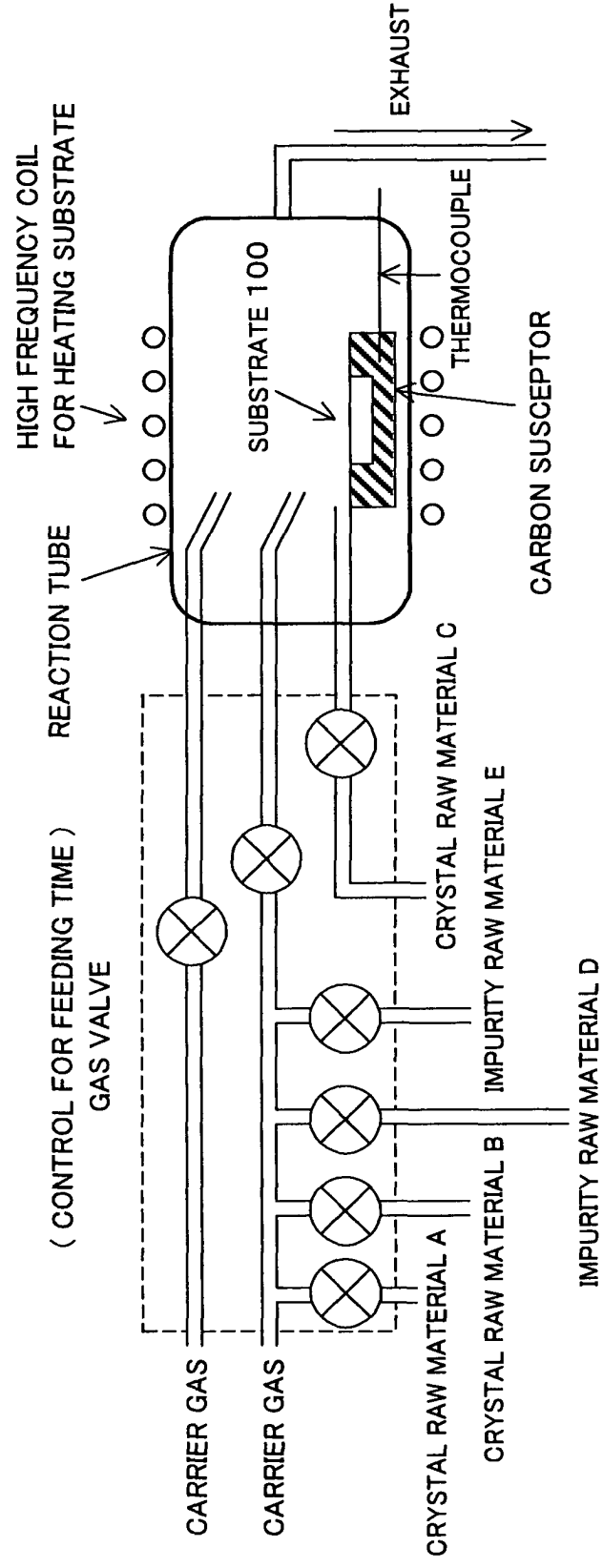


FIG. 3

SEQUENCES IN PULSES FOR FEEDING RAW MATERIALS

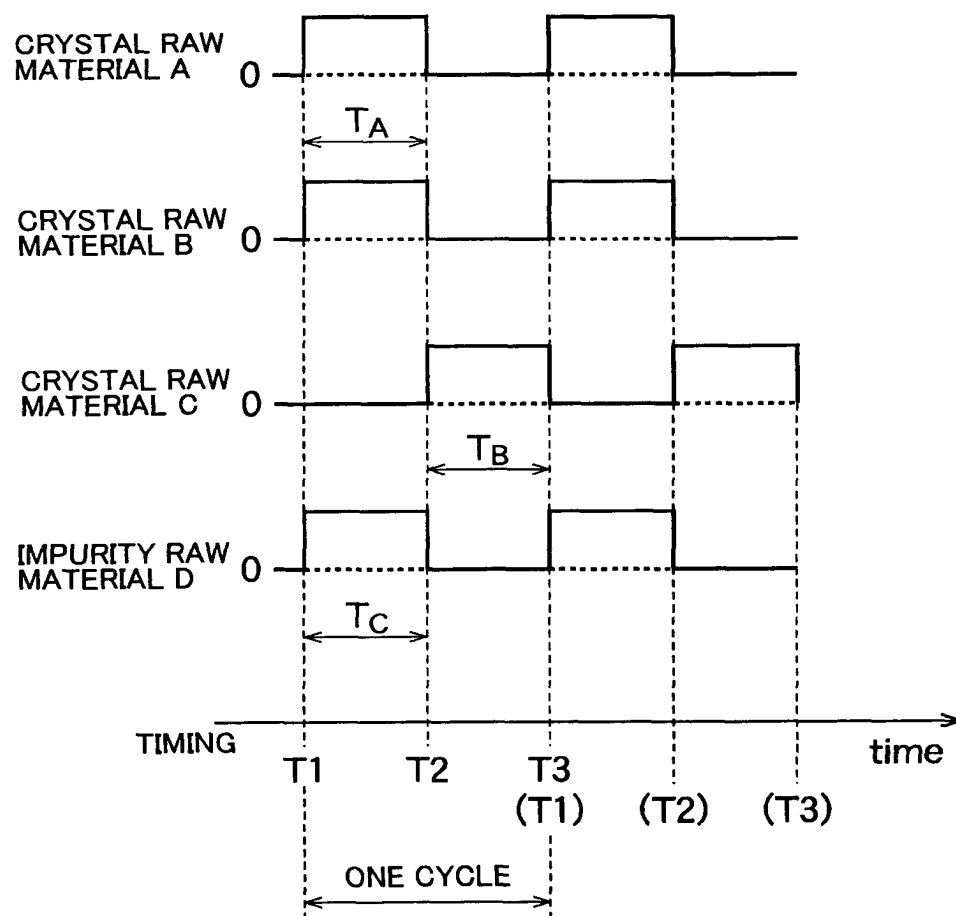


FIG. 4

CRYSTAL STRUCTURE FORMED IN ACCORDANCE
WITH TIMINGS SHOWN IN FIG. 3

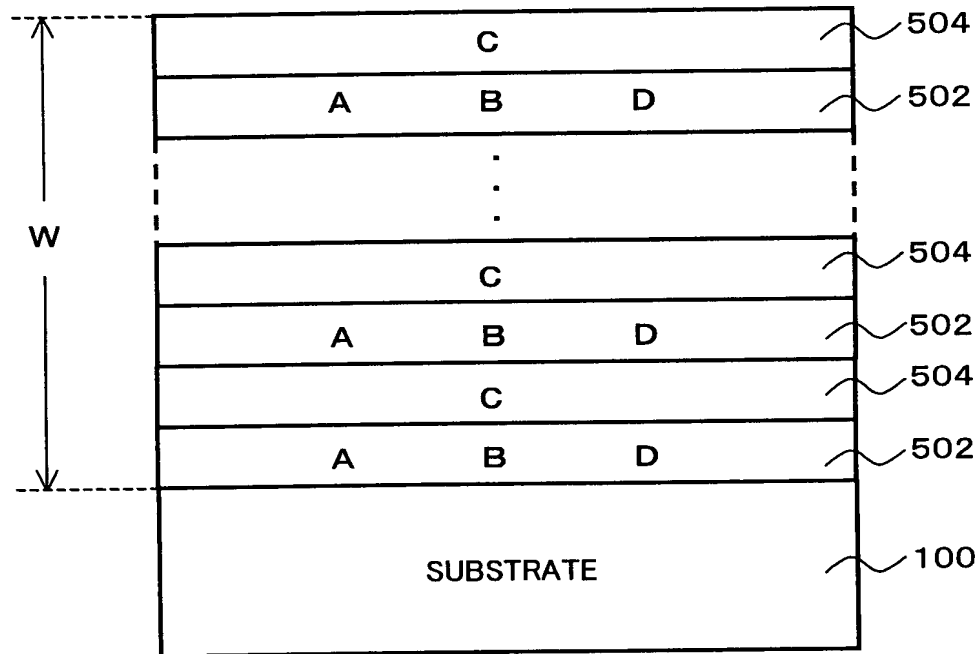


FIG. 5

SEQUENCES IN PULSES FOR FEEDING RAW MATERIALS

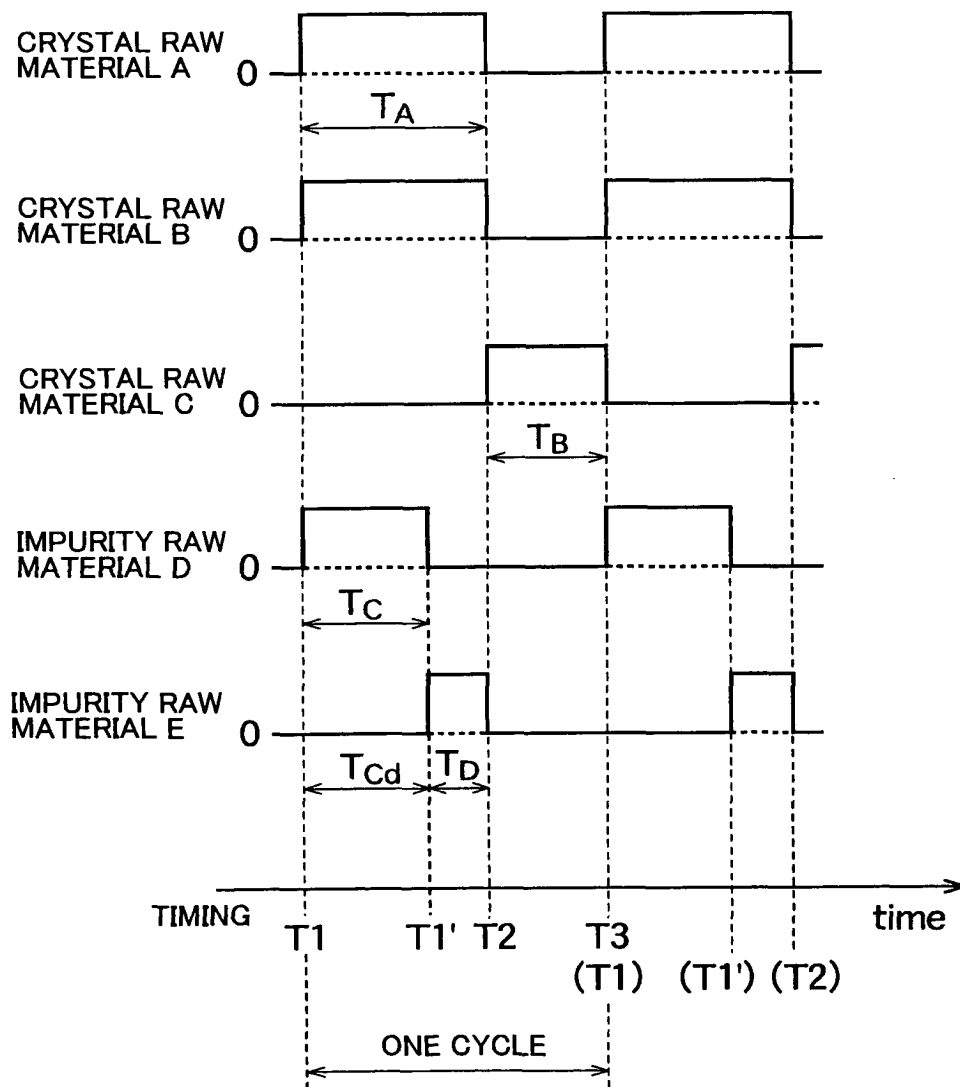


FIG. 6

CRYSTAL STRUCTURE FORMED IN ACCORDANCE
WITH TIMINGS SHOWN IN FIG. 5

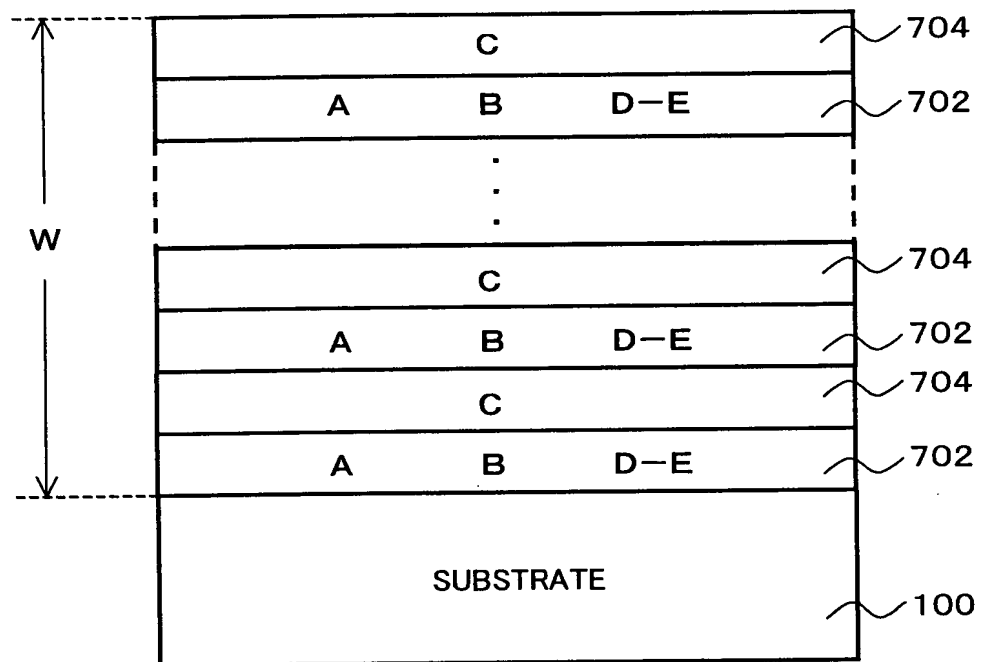


FIG. 7

METALORGANIC CHEMICAL VAPOR DEPOSITING APPARATUS FOR AlGaN CRYSTAL GROWTH (METALORGANIC CHEMICAL VAPOR DEPOSITING METHOD)

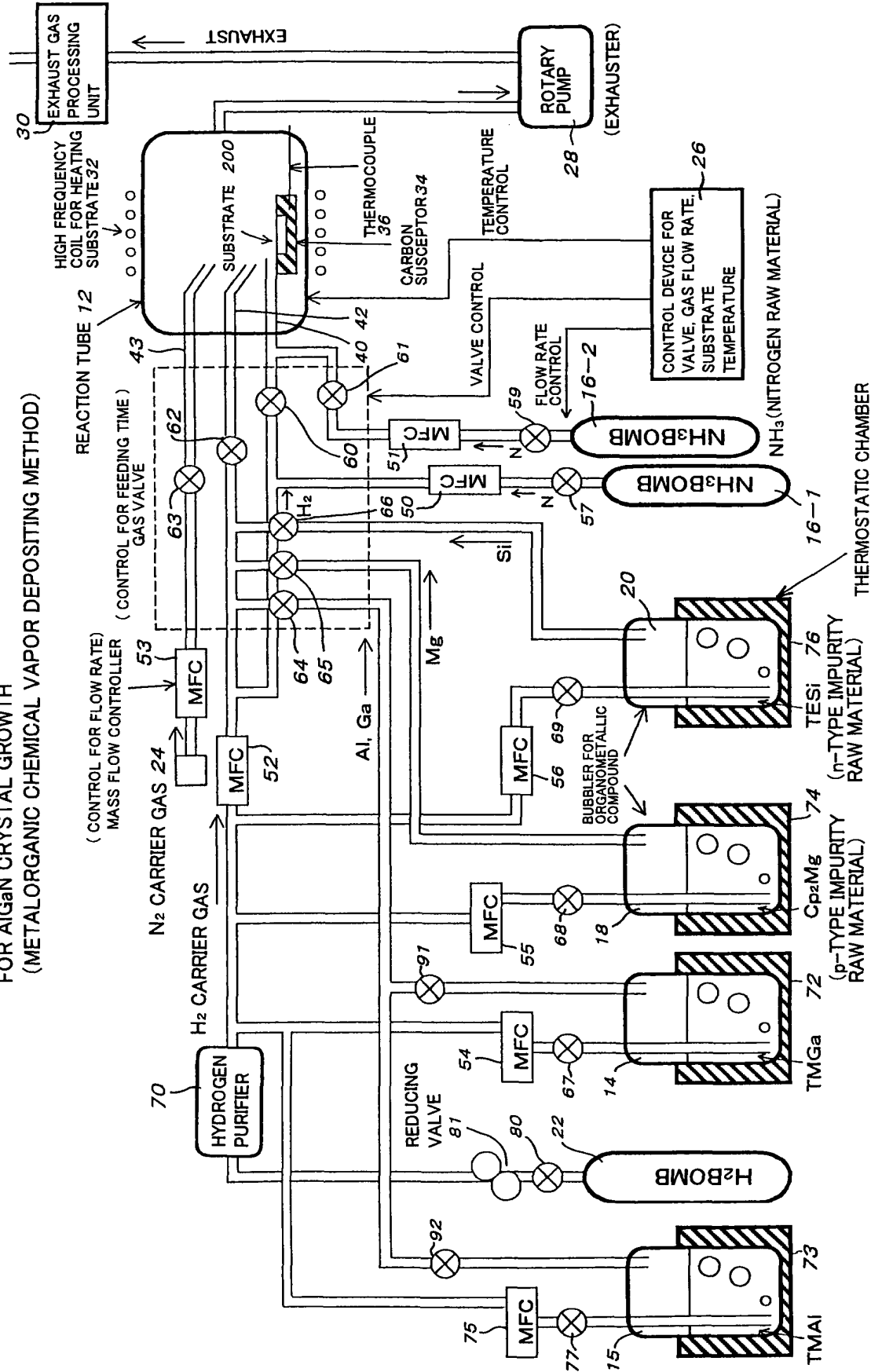


FIG. 8

METALORGANIC CHEMICAL VAPOR DEPOSITING APPARATUS
FOR AlGaN CRYSTAL GROWTH 10
(METALORGANIC CHEMICAL VAPOR DEPOSITING METHOD)

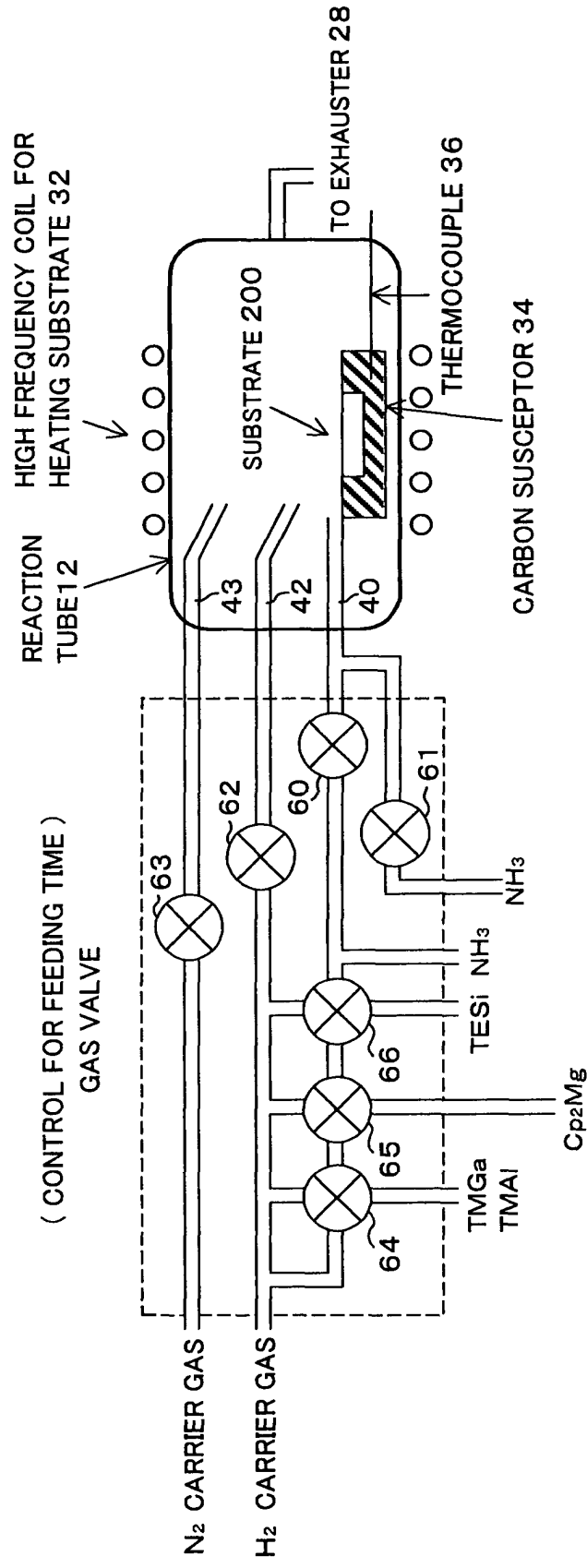
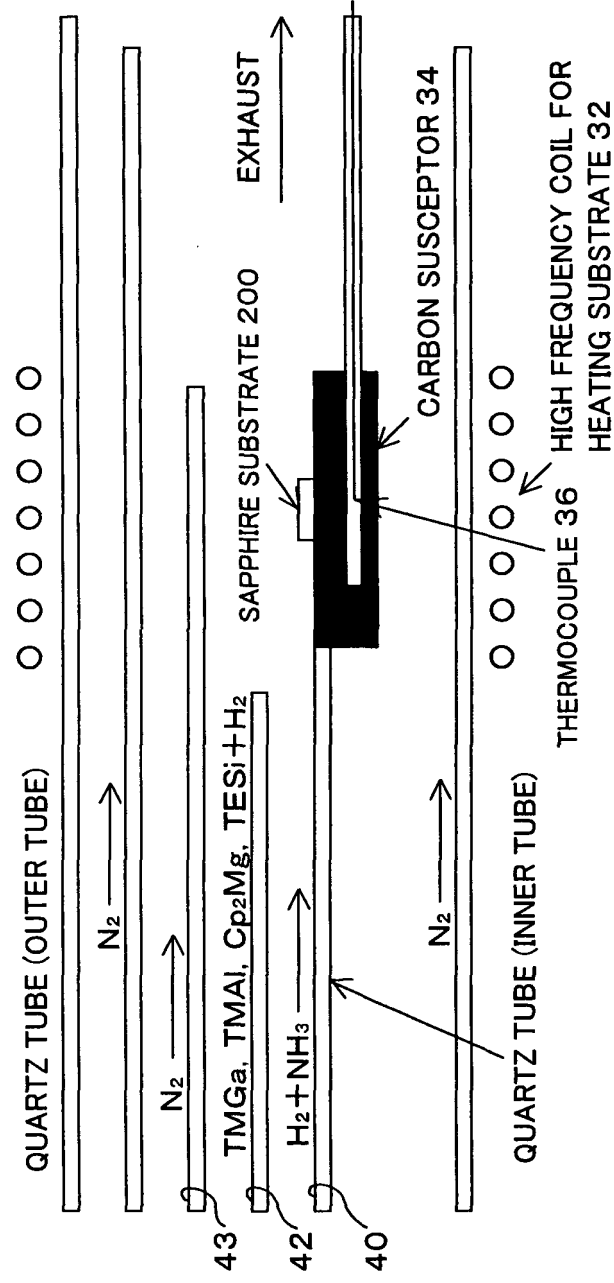


FIG. 9

SCHEMATIC DIAGRAM FOR MOCVD REACTION TUBE



PRESSURE IN REACTION TUBE : 76Torr

FIG. 10

SEQUENCES OF PULSES FOR FEEDING RAW
MATERIALS IN CASE OF FORMING AlGaN

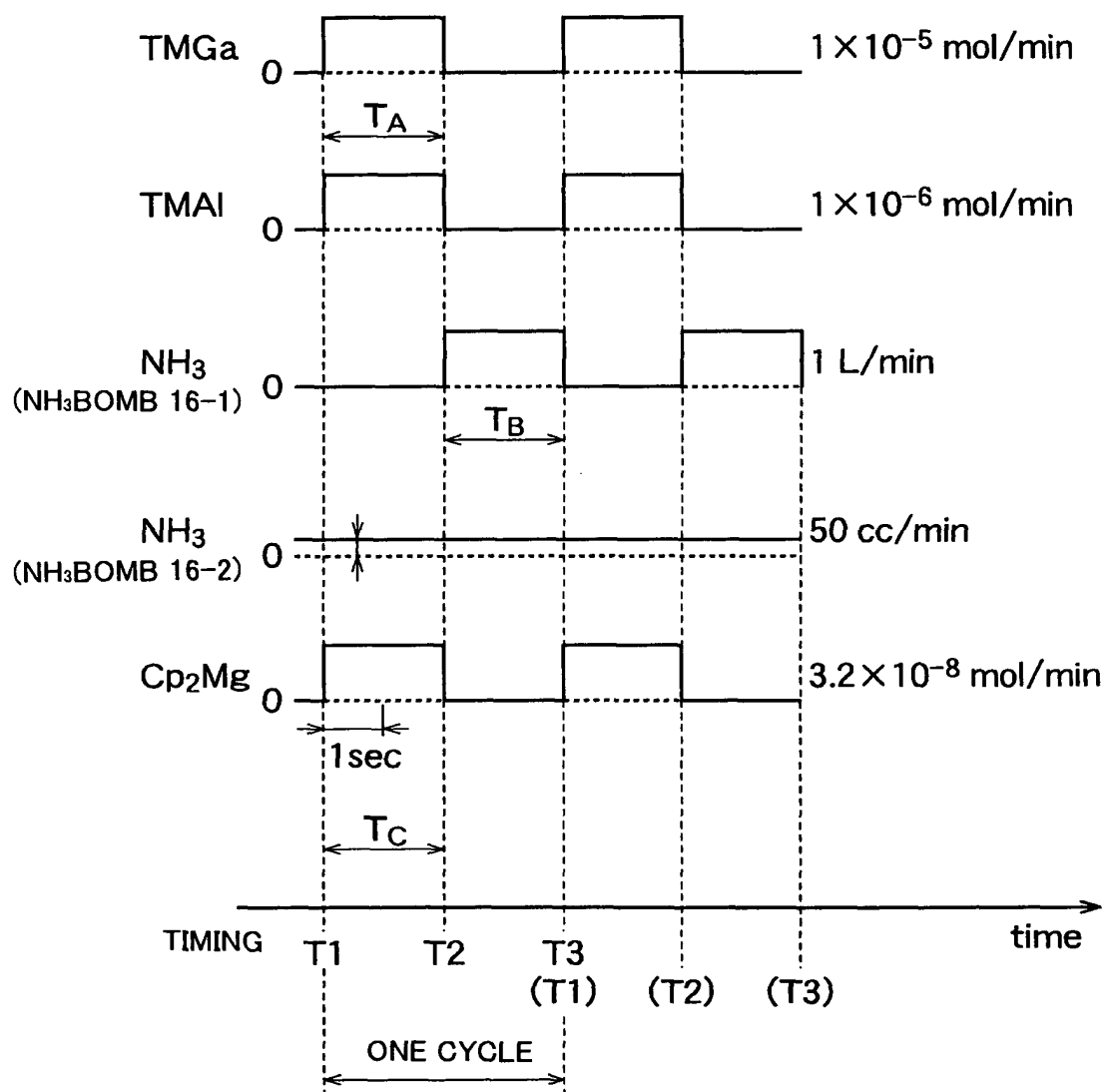


FIG. 11

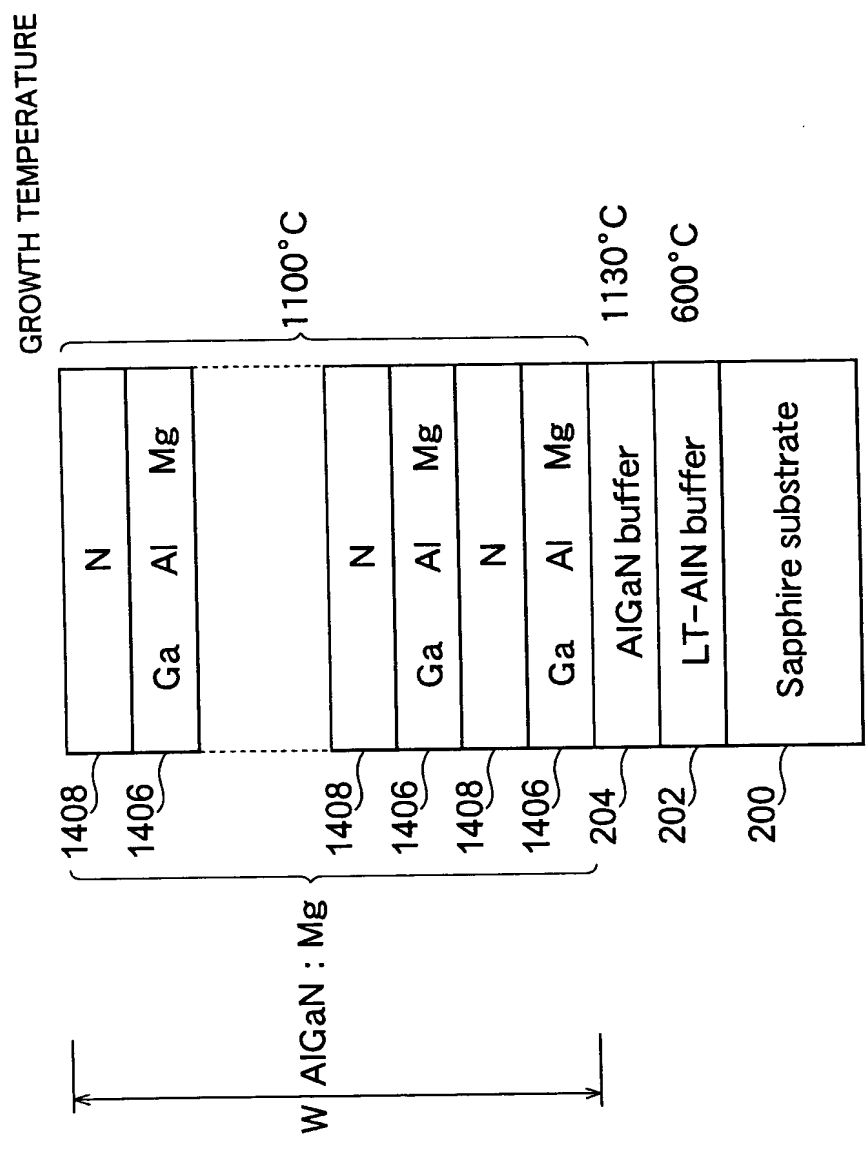


FIG. 12

SEQUENCES OF PULSES FOR FEEDING RAW
MATERIALS IN CASE OF FORMING AlGa_N

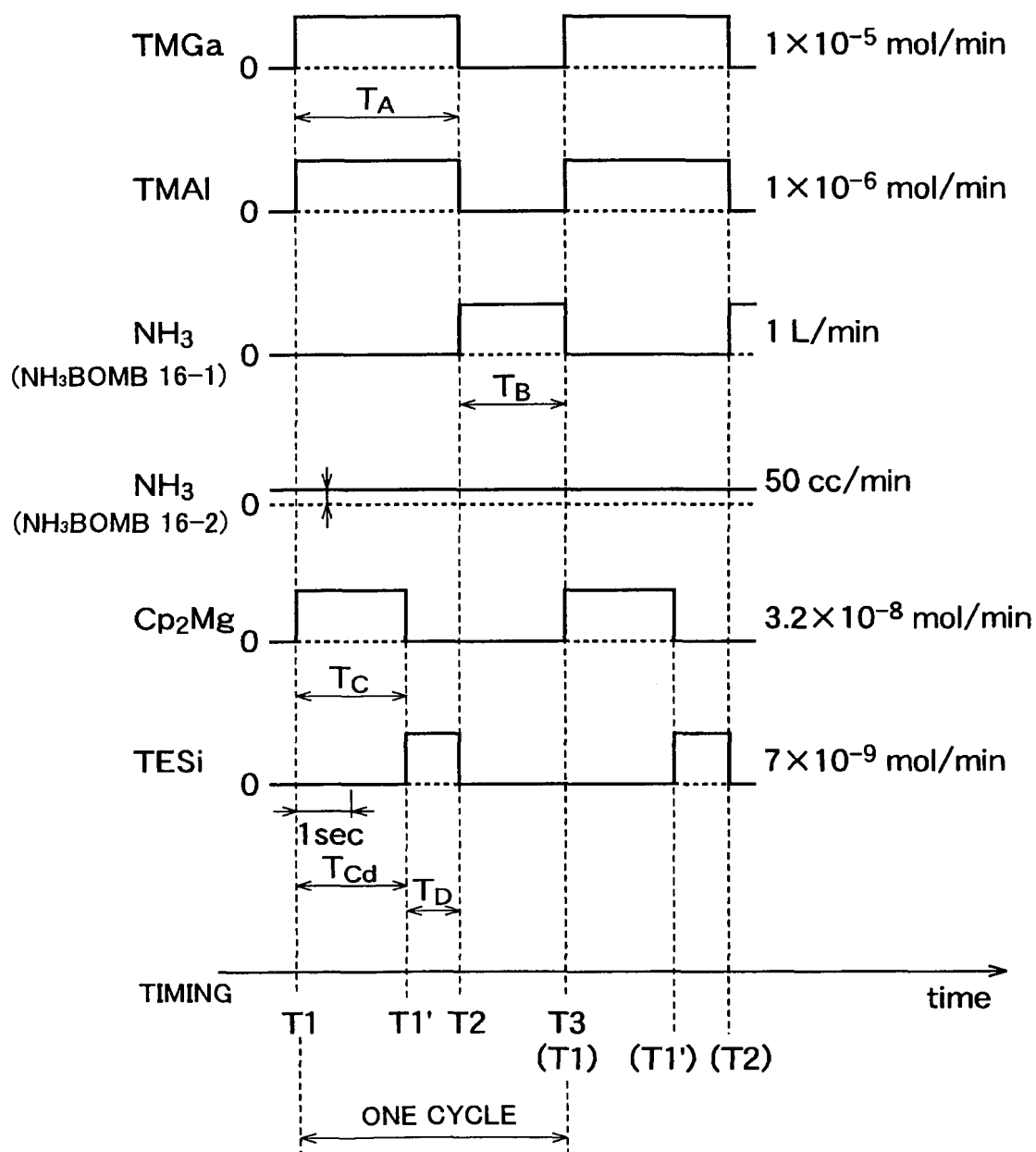


FIG. 13

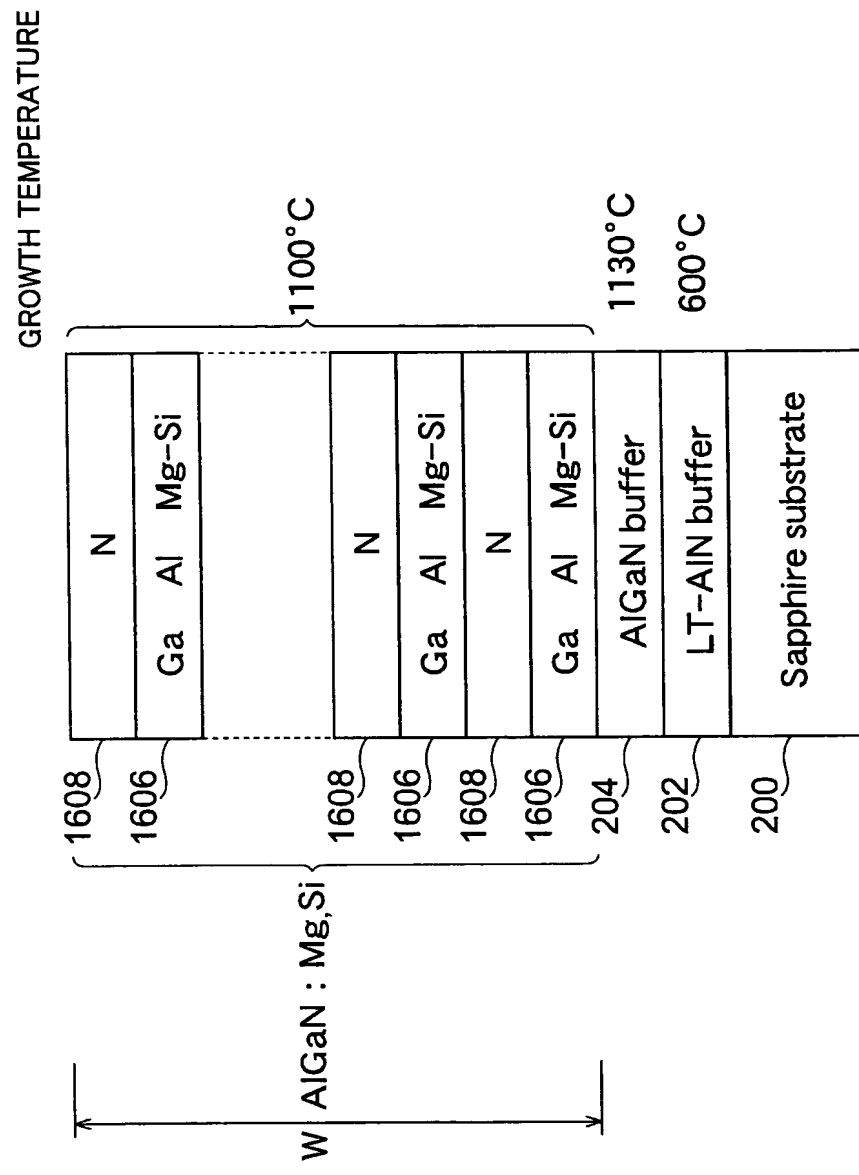


FIG. 14

TEMPERATURE DEPENDENCE OF HOLE CONCENTRATION
IN AlGa_{1-x}N DOPED WITH Mg

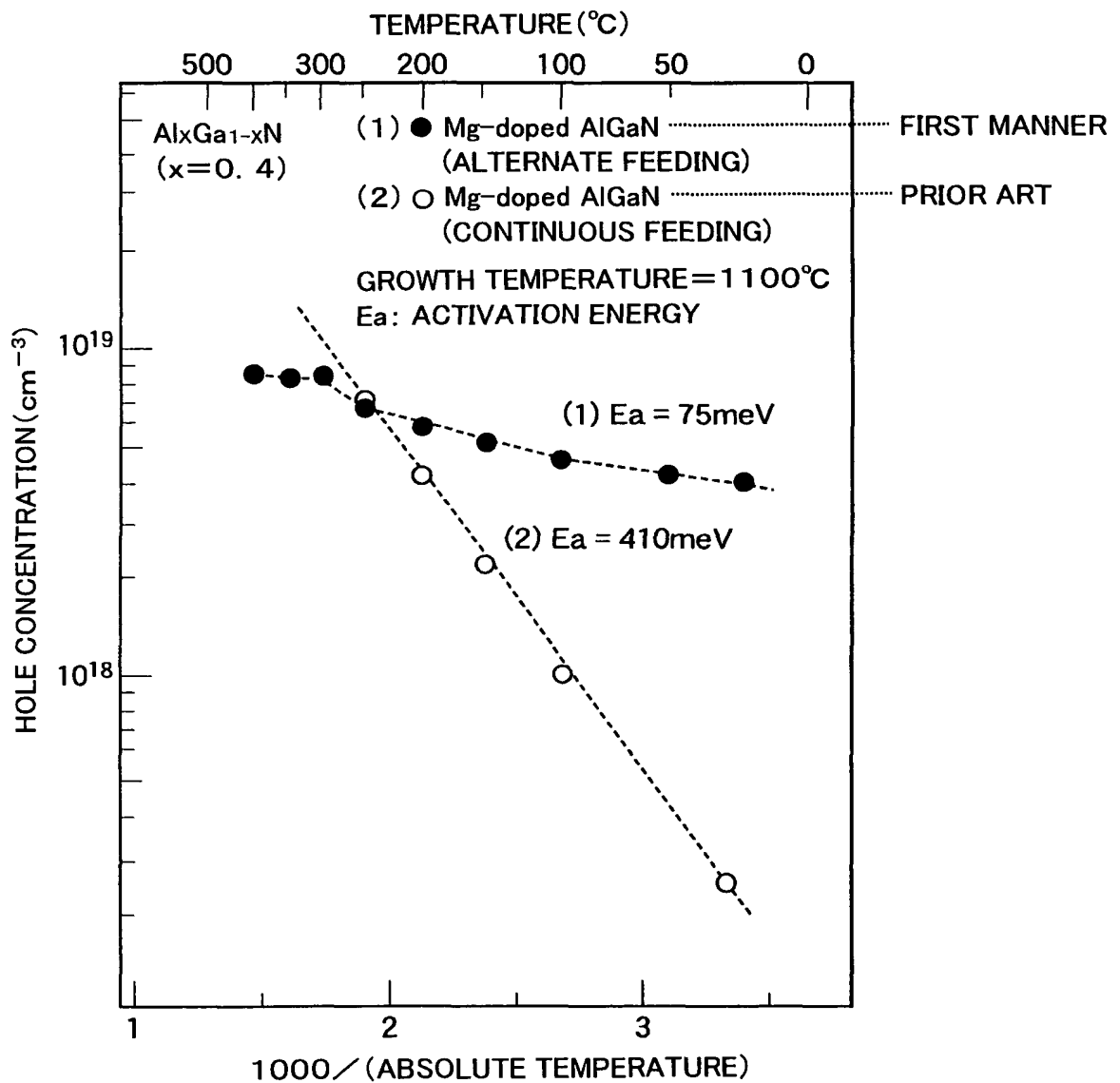


FIG. 15

TEMPERATURE DEPENDENCE OF HOLE CONCENTRATION
IN AlGa_N DOPED WITH Mg AND Si

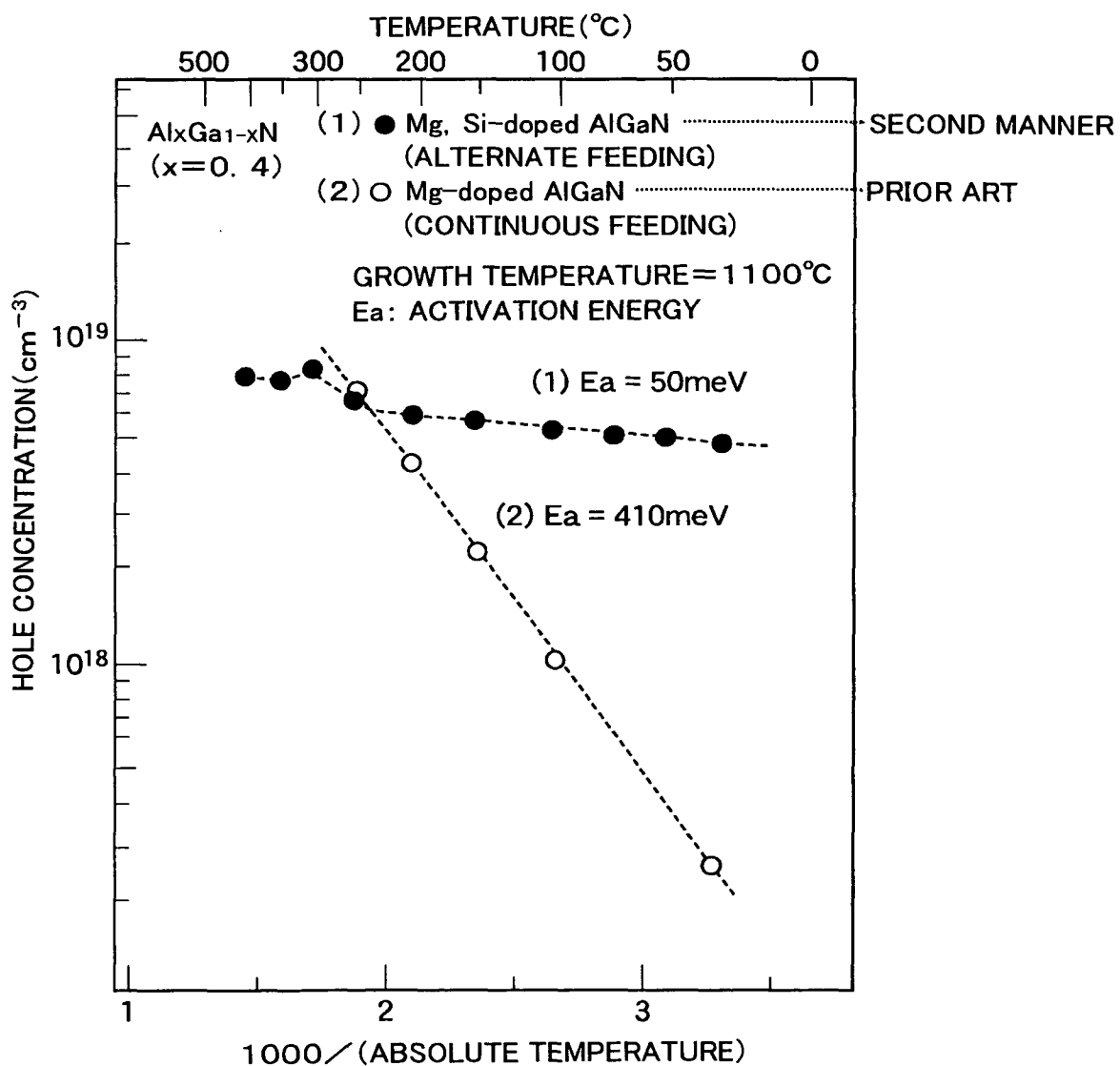


FIG. 16

DEPENDENCE OF Si FEED RATE IN HOLE CONCENTRATION
OF AlGaN DOPED WITH Mg-Si

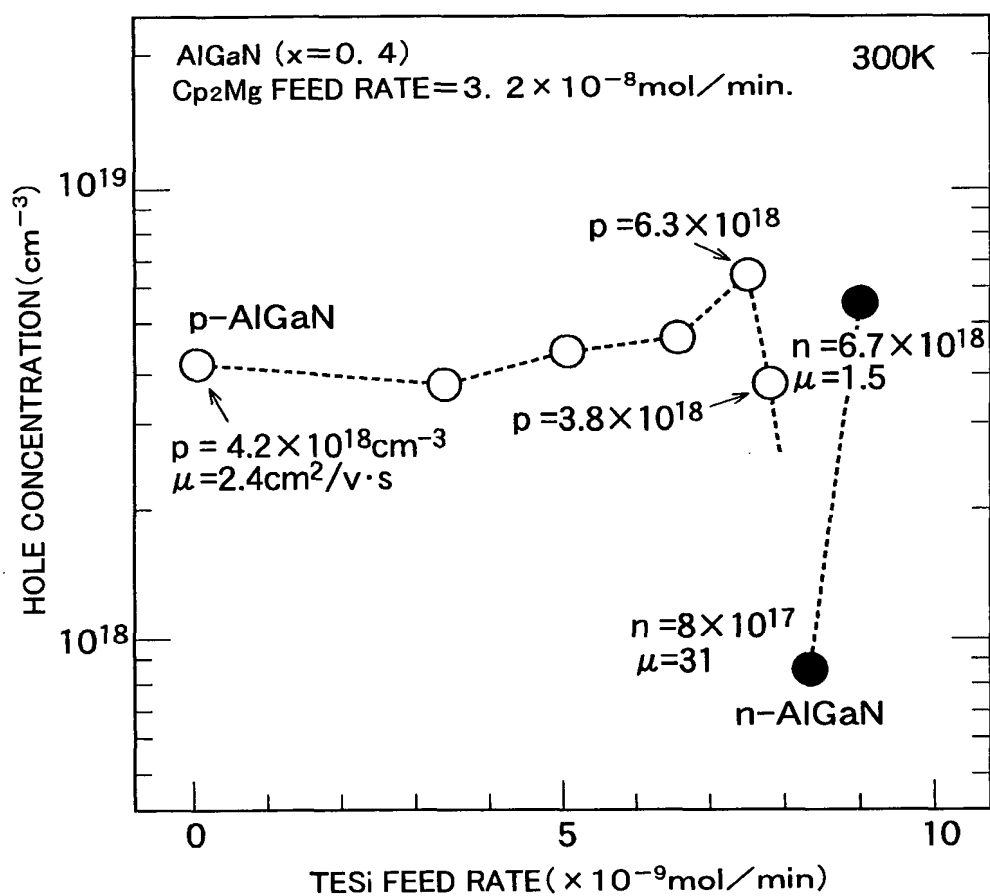


FIG. 17

ULTRAVIOLET OUTPUT SPECTRA OF LED TYPE I

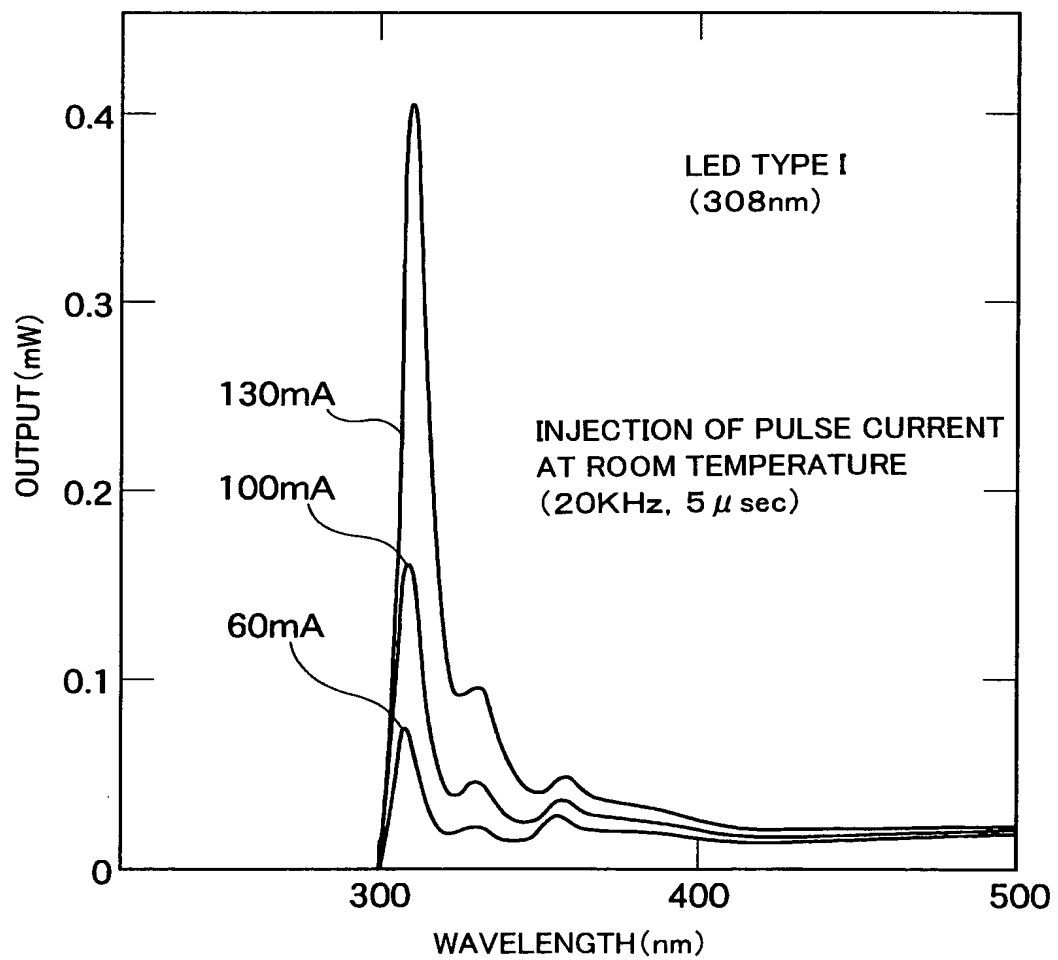


FIG. 18

ULTRAVIOLET OUTPUT SPECTRA OF LED TYPE II

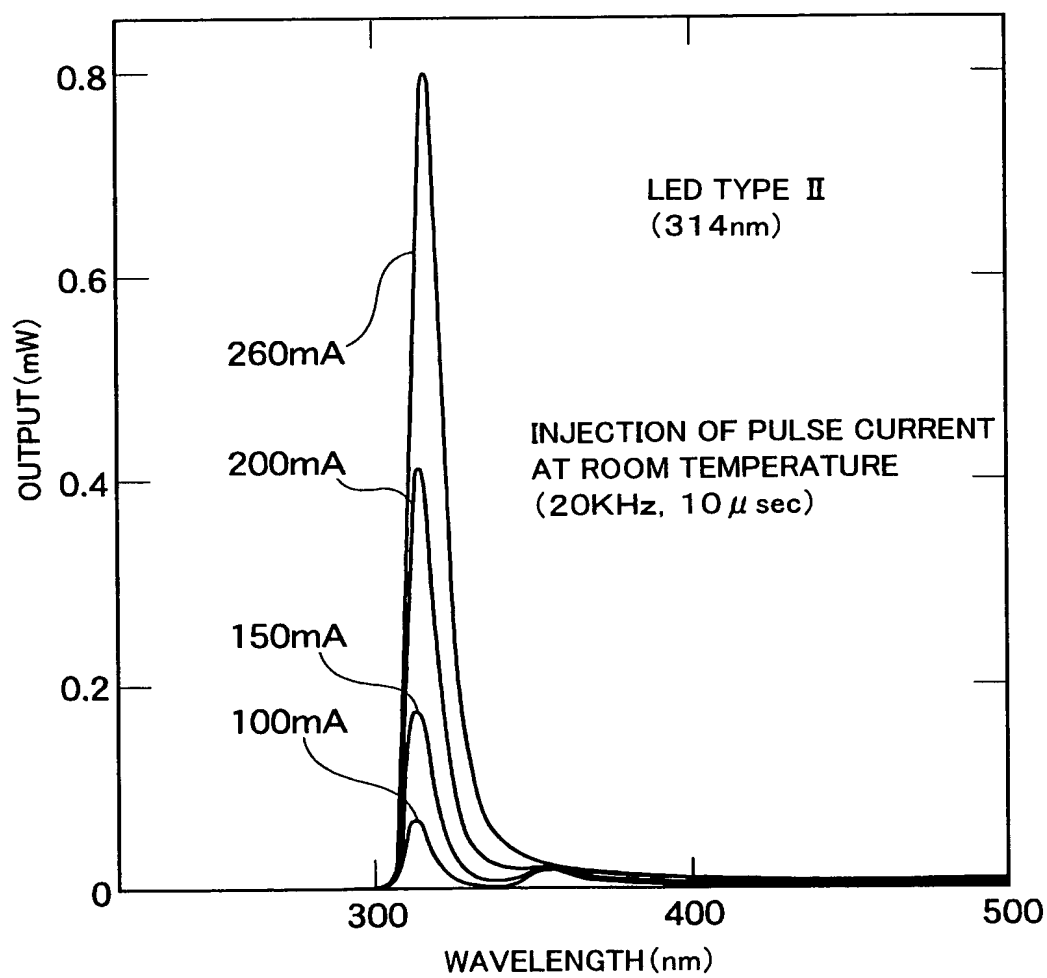


FIG. 19

ULTRAVIOLET OUTPUT SPECTRA OF LED TYPE III

